



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,685	09/17/2003	Harumi Aoishi	Q77511	2446
23373	7590	10/05/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			RENNER, CRAIG A	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/663,685	AOISHI, HARUMI	
	Examiner	Art Unit	
	Craig A. Renner	2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 July 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-16 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 July 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION***Drawings***

1. The drawings were received on 25 July 2005. These drawings are accepted.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "member... bonded on the bottom surface of the large-diameter portion of the center core" set forth in claim 13, and the "member... bonded on a portion of the interior surface of a lower shell of the casing, which contacts the bottom surface of the large-diameter portion of the center core" set forth in claim 15, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional

replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following is suggested:

--DISK CARTRIDGE WITH CENTER CORE HAVING LARGE-DIAMETER
PORTION WITH THICKNESS LARGER THAN THAT OF CARTRIDGE LINER--.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 6-7 and 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Many elements in the claims are indefinite because they lack clear and/or proper antecedent basis including "said top surface" (line 1 of claim 6 and line 2

of claim 7); "the magnetic medium" (line 3 of claim 7), "the outside diameter b" (line 1 of claim 10 and line 1 of claim 11), "the inside diameter c" (lines 2-3 of claim 10 and line 2 of claim 11), and "the lower dust-removing liner" (lines 1-2 of claim 12).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Meguro et al. (US 6,433,963).

Meguro teaches a disk cartridge (1) comprising a disk medium (5) fixedly attached on a center core (11); a casing (6), in which the disk medium is rotatably enclosed, the casing comprising a spindle hole (26) through which the center core is exposed to the exterior; and a dust-removing liner (102) fixed on an interior surface of the casing; wherein the center core comprises a large-diameter portion (14) with an outside diameter greater than the inside diameter of the spindle hole of the casing (lines 23-26 in column 4, for instance, and as shown in FIG. 19, for instance), and a thickness greater than that of the dust-removing liner (as shown in FIG. 19, for instance), and a disk surface (adjacent

12) on which the disk medium is fixedly attached; and a small-diameter portion (between 14 and 17 in FIG. 19, for instance) which has an outside diameter smaller than the inside diameter of the spindle hole of the casing (as shown in FIG. 19, for instance), and which is formed on a side, opposite from the disk surface, of the large-diameter portion (as shown in FIG. 19, for instance) so that it is exposed to the exterior through the spindle hole of the casing (as shown in FIG. 19, for instance), wherein the large-diameter portion comprises a substantially straight top surface (adjacent 12) of the center core (as shown in FIG. 19, for instance) [as per claim 3]; wherein the disk medium comprises a magnetic disk medium (lines 39-40 in column 3, for instance) [as per claim 4]; and wherein the dust-removing liner has a center hole (108), arranged approximately concentrically with the spindle hole of the casing (as shown in FIG. 18, for instance), which has an insider diameter greater than the outside diameter of the large-diameter portion of the center core (as shown in FIG. 19, for instance) [as per claim 5].

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meguro et al. (US 6,433,963).

Meguro teaches the disk cartridge as detailed in paragraph 7, supra. Meguro, however, remains silent as to "wherein the thickness of the lower dust-removing liner is in a range of 0.1 mm to 0.3 mm, and the thickness of the large-diameter portion of the center core is in a range of 0.5 mm to 2 mm" as per claim 12, "wherein a member with a high sliding property is bonded on the bottom surface of the large-diameter portion of the center core" as per claim 13, "wherein the member with a high sliding property is a high polymer PE" as per claim 14, "wherein a member with a high sliding property is bonded on a portion of the interior surface of a lower shell of the casing, which contacts the bottom surface of the large-diameter portion of the center core" as per claim 15, and "wherein the member with a high sliding property is a high polymer PE" as per claim 16.

Official notice is taken of the fact that it is notoriously old and well known in the disk cartridge art to modify the parameters of disk cartridge components during the course of routine optimization/experimentation. Official notice is also taken of the fact that it is notoriously old and well known in the disk cartridge art to provide a high polymer PE member with a high sliding property at a contact location for the purpose of reducing wear. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had the thickness of the lower dust-removing liner of Meguro be in a range of 0.1 mm to 0.3 mm, and the thickness of the large-diameter portion of the center core of Meguro be in a range of 0.5 mm to 2 mm, and to have had a high polymer PE

member with a high sliding property bonded on the bottom surface of the large-diameter portion of the center core of Meguro, and to have had a high polymer PE member with a high sliding property bonded on a portion of the interior surface of a lower shell of the casing of Meguro, which contacts the bottom surface of the large-diameter portion of the center core of Meguro. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have had the thickness of the lower dust-removing liner of Meguro be in a range of 0.1 mm to 0.3 mm, and the thickness of the large-diameter portion of the center core of Meguro be in a range of 0.5 mm to 2 mm since such ranges, absent any criticality (i.e., unobvious and/or unexpected result(s)), are generally achievable through routine optimization/experimentation, and since discovering the optimum or workable ranges, where the general conditions of a claim are disclosed in the prior art, involves only routine skill in the art, *In re Aller*, 105 USPQ 233 (CCPA 1955). Moreover, in the absence of any criticality (i.e., unobvious and/or unexpected result(s)), the parameters set forth above would have been obvious to a person having ordinary skill in the art at the time the invention was made, *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

One of ordinary skill in the art would have been motivated to have had a high polymer PE member with a high sliding property bonded on the bottom surface of the large-diameter portion of the center core of Meguro, and to have had a high polymer PE member with a high sliding property bonded on a portion of the interior surface of a lower shell of the casing of Meguro, which contacts the

bottom surface of the large-diameter portion of the center core of Meguro since such reduces wear.

10. Claims 1-3 and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art FIGS. 3-4 and detailed description thereof in view of Meguro et al. (US 6,433,963).

With respect to claims 1-2, 6-8 and 10-11, applicant's admitted prior art FIGS. 3-4 and detailed description thereof teaches a disk cartridge (C) comprising a disk medium (4) fixedly attached to a center core (3); a casing (includes 1 and 2, for instance) in which the disk medium is rotatably enclosed, the casing comprising a spindle hole (2c) through which the center core is exposed to an exterior of the disk cartridge; and a dust-removing liner (5) fixed on an interior surface of the casing; where the disk medium is fixedly attached to the center core, and where the disk medium is disposed entirely above the center core (as shown in FIG. 4, for instance) [as per claims 1, 8 and 10-11]; wherein the disk medium comprises a magnetic disk medium (line 22 on page 2, for instance) [as per claim 2]; wherein the top surface of the center core is straight (as shown in FIG. 4, for instance) [as per claim 6]; and wherein the disk cartridge further comprises a press plate (6), which is fixedly attached to the top surface of the center core, and wherein an annular press portion (6a) of the press plate is pressed against the magnetic medium (as shown in FIG. 4, for instance) [as per claim 7].

With respect to claims 3 and 9, applicant's admitted prior art FIGS. 3-4 and detailed description thereof teaches a disk cartridge (C) comprising a disk medium (4) fixedly attached on a center core (3); a casing (includes 1 and 2, for instance), in which the disk medium is rotatably enclosed, the casing comprising a spindle hole (2c) through which the center core is exposed to the exterior; and a dust-removing liner (5) fixed on an interior surface of the casing; wherein the center core comprises a small-diameter portion which has an outside diameter (a) smaller than the inside diameter (c) of the spindle hole of the casing (as shown in FIG. 4, for instance), and which is formed on a side, opposite from the disk surface, so that it is exposed to the exterior through the spindle hole of the casing (as shown in FIG. 4, for instance) [as per claim 3]; wherein the dust-removing liner is straight (as shown in FIG. 4, for instance) [as per claim 9].

Applicant's admitted prior art, however, remains silent as to "wherein said center core comprises a large-diameter portion with an outside diameter greater than the inside diameter of the spindle hole of said casing, and a thickness greater than that of said dust-removing liner" as per claims 1-3 and 6-11, "wherein the large-diameter portion comprises a substantially straight top surface of the center core" as per claims 3 and 9, "wherein said center core is T shaped" as per claim 8, "wherein the outside diameter b of the large-diameter portion of the center core is 0.5 mm to 2 mm greater than the inside diameter c of the spindle hole of a lower shell of the casing" as per claim 10, and "wherein the outside diameter b of the large-diameter portion of the center core is 0.5 mm to 1

mm greater than the inside diameter c of the spindle hole of a lower shell of the casing" as per claim 11.

Meguro teaches a center core (11) comprising a large-diameter portion (14) with an outside diameter greater than an inside diameter of a spindle hole (26) of a casing (6), and a thickness greater than that of a dust-removing liner (102), wherein the large-diameter portion comprises a substantially straight top surface of the center core (as shown in FIG. 19, for instance), and wherein the center core is T shaped (as shown in FIG. 19, for instance) in the same field of endeavor for the purpose of limiting disk movement during handling (lines 35-39 in column 10, for instance). Official notice is taken of the fact that it is notoriously old and well known in the disk cartridge art to modify the parameters of disk cartridge components during the course of routine optimization/experimentation. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had the center core of applicant's admitted prior art comprise a large-diameter portion with an outside diameter greater than the inside diameter of the spindle hole of the casing, and a thickness greater than that of the dust-removing liner, wherein the large-diameter portion comprises a substantially straight top surface of the center core, and wherein said center core is T shaped as taught by Meguro, and to have had the outside diameter b of the large-diameter portion of the center core of applicant's admitted prior art in view of Meguro be 0.5 mm to 2 mm greater than the inside diameter c of the spindle hole of a lower shell of the casing, and the outside diameter b of the large-diameter portion of the center core of applicant's admitted prior art in view of

Meguro is 0.5 mm to 1 mm greater than the inside diameter c of the spindle hole of a lower shell of the casing. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have had the center core of applicant's admitted prior art comprise a large-diameter portion with an outside diameter greater than the inside diameter of the spindle hole of the casing, and a thickness greater than that of the dust-removing liner, wherein the large-diameter portion comprises a substantially straight top surface of the center core, and wherein said center core is T shaped as taught by Meguro since such limits disk movement during handling.

One of ordinary skill in the art would have been motivated to have had have had the outside diameter b of the large-diameter portion of the center core of applicant's admitted prior art in view of Meguro be 0.5 mm to 2 mm greater than the inside diameter c of the spindle hole of a lower shell of the casing, and the outside diameter b of the large-diameter portion of the center core of applicant's admitted prior art in view of Meguro is 0.5 mm to 1 mm greater than the inside diameter c of the spindle hole of a lower shell of the casing since such ranges, absent any criticality (i.e., unobvious and/or unexpected result(s)), are generally achievable through routine optimization/experimentation, and since discovering the optimum or workable ranges, where the general conditions of a claim are disclosed in the prior art, involves only routine skill in the art. See *In re Aller*, supra. Moreover, in the absence of any criticality (i.e., unobvious and/or unexpected result(s)), the parameters set forth above would have been obvious

to a person having ordinary skill in the art at the time the invention was made.

See *In re Woodruff*, supra.

Pertinent Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. This includes Kato et al. (US 4,743,994), which teaches a disk cartridge with a center core having a small-diameter portion and a large-diameter portion with a thickness larger than that of a cartridge liner.

Response to Arguments

12. Applicant's arguments filed 25 July 2005 with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

13. Applicant's arguments filed 25 July 2005 with respect to claim 3 have been fully considered but they are not persuasive.

The applicant argues that "Meguro does not teach or suggest the large-diameter portion having a substantially straight top surface of said center core." This argument, however, is not found to be persuasive as Meguro does teach a large-diameter portion (14) having a substantially straight top surface (adjacent 12) of a center core (11) as shown in FIG. 19, for instance. Note that the limitation "top surface" does not necessarily mean the top-most or upper-most surface, but may be broadly construed to be any top surface of the center core

and, in this instance, the top surface of the center core that corresponds to the large-diameter portion.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Renner whose telephone number is (571) 272-7580. The examiner can normally be reached on Tuesday-Friday 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Craig A. Renner
Primary Examiner
Art Unit 2652

CAR